VI.—*Note on Thylacinus Cynocephalus. Extracted from the Osteological Section of the Catalogue of the Museum of the Asiatic Society. By* J. T. Pearson, *Esq.*

Class—Mammalia. *Order*—Carnassiers. *Fam.*—Marsupiata. *Gen.*—Thylacynus. *Sp.*—Thylacynus Cynocephalus.

Van Diemen's Land Tiger.

A Skull.

This specimen (Pl. XLVIII. fig. 49) was taken from the skin of an animal called the Van Diemen's Land Tiger, presented to the Society by Dr. J. Henderson; and described in the 3rd vol. of the Gleanings in Science, by Dr. J. Grant.

It was before described in the 9th vol. of the Transactions of the Linnæan Society, by Harris; and it is mentioned in the Synopsis of Mammalia of Griffith's Cuvier, under the name of Dasyurus Cynocephalus. Mr. Brooks, as it is there stated, thought it the type of a new genus, to be named *Paracyon:* and M. Temminck has since formed it into one, under the name of *Thylacynus.* In all these, however, the dentition is incorrectly given. In the Linnæan Transactions, and in the Gleanings in Science, the cheek teeth are represented as $\frac{6}{7}\frac{6}{7}$, and in the Synopsis of Griffith's, the dentary system of Dasyurus is attached to it, viz. incisors $\frac{8}{6}$; canines, $\frac{1}{1}\frac{1}{1}$; cheek teeth, $\frac{6}{6}\frac{6}{6}$. So far as relates to the incisors and canines, Griffiths is probably correct; for, although some of the incisors are wanting in the present specimen, there are eight sockets above, and six below; the second on each side of the latter being situated apparently within the row of the other four, as happens to the middle incisors of Brooks' genus *Lycaon.* The dentition of *Thylacynus* is therefore, incisors, $\frac{8}{6}$; canines, $\frac{1}{1}\frac{1}{1}$; cheek teeth, $\frac{7}{7}\frac{7}{7} = 46$, and omitting the incisors, some of which are wanting in the present specimen, the teeth may be described as follows:

Superior maxilla—*canines* strong, large, and curved backward, with the points inclining rather inward; separated from the incisors by a deep, round fossa, or hollow, nearly half an inch in diameter, to receive the point of the opposing canine of the lower jaw. *Cheek teeth* gradually increasing in size to the last but one, which is the longest. The three anterior ones are compressed, cuspid, with a heel at the posterior side; but little developed in the first, more so in the second, and largely in the third, where it is formed into almost a sharp tubercle. The fourth, fifth, and sixth cheek teeth irregularly triangular, with the most obtuse angle forward and outward, and the most acute, backward and outward. The fourth tooth has a

tubercle at each anterior angle, the outer one having a point, forming a small heel before it; a larger and sharper central process; a very small additional point arising out of a concave surface between the central process and posterior angle; and a curved, sharp, cutting edge extending along the inner and posterior side of the tooth, from the central process to the posterior angle. The fifth tooth is, in general appearance, similar to the fourth, but rather larger than it; with the central process longer in proportion, with only a rudiment of the small point of the concave surface, and the posterior and inner cutting edge larger and sharper. The sixth tooth is the largest: the heel of the anterior tubercle is more strongly developed, and the outer and central processes are larger and sharper than in the other teeth; the posterior interior cutting edge is very sharp, and there is scarcely a trace of the additional point. The seventh tooth is also triangular in its form, but with its longest axis placed cross-wise, with an obtuse anterior interior tubercle, another posterior one, and a third rather sharper than those in the centre, with a sharp elevated ridge extending across to the most acute angle at the outer side, uniting the central with a fourth tubercle at the outer angle.

With regard to the placing of the teeth in the jaw: the sockets of the four incisors on each side are close together, but between those of the two central incisors there is an interval of about $\frac{1}{10}$th of an inch, indicating a corresponding gap between the teeth. Between the incisors and canines there is the pit in the intermaxillary bones already mentioned. The first molar is almost close to the canine of its side; the second molar is separated by an interval of $\frac{2}{10}$ths of an inch nearly, from the first; the third molar is rather more than $\frac{1}{10}$th of an inch from the second, and it adjoins the fourth, forming with it, the fifth and the sixth, a continuous series of four teeth, from which the seventh is separated by about $\frac{1}{10}$th of an inch.

Inferior maxilla—*canines* strong, much curved, approximating at the base, then proceeding outward, with the points turned backward, and rather inward; placed close to the incisors, which appear jammed between them; and the points not going on the outside of the intermaxillary bones when the jaws are shut, but received into the fossa in those bones, between the upper incisor and canine teeth. *Cheek-teeth* gradually increasing in size to the third, than which the fourth is rather smaller; and again, from the fourth to the last, which is the largest of all: first, second, and third, like those in the upper jaw: fourth, fifth, sixth, and seventh tricuspid, with an acute angular point in front, a very elevated sharp process, with cutting edges in the centre, and a tuberculous process behind. This last

process approaches to a grinding surface, with an acute margin at the outer and posterior sides, in the fourth, fifth, and sixth teeth; and it is of a rather round, tuberculous form, in the seventh tooth.

The first molar in the under jaw is placed close to the canine tooth of its side; the second is about $\frac{1}{10}$ht of an inch from the first; the third rather more from the second; and there is another space between the third and fourth of about $\frac{1}{10}$th of an inch: the four last teeth form a continuous row.

The lower canines being received into pits in the intermaxillary bones, is somewhat like an approach to what takes place in some of the Saurian reptiles; and indeed, the whole view of the skull of Thylacynus Cynocephalus reminds the casual observer almost as much of a Saurian as of a Mammiferous animal.

When presented to the Society, the stuffed specimen was, as it is said, in a bad state; and when the present Curator entered upon his office, there was, owing to no care having been taken of it, nothing to be done, but to take out the bones, to preserve them. This, however, was so far fortunate, as it has led to the discovery of the real dental system.

Mr. Grant, who drew up the paper in the "Gleanings in Science," proposed the name of Lycocephalus for this species, apparently not aware that Harris had before named and described it. His mistake as to the number of teeth arose from not having been able to open the mouth far enough to allow him to examine them properly; and Harris's specimen may have been an old one, and lost a tooth on each side. The Society's specimen was of a middle age, rather young perhaps than otherwise: the bones of the skull being well knit together, though not fixed by bony union.

It is greatly to be wished, that some friend to the Society would present another specimen.

VII.—*Analysis of Copper Ore from Nellore; with notice of the Copper Mines at Ajmír and Singhána.* By James Prinsep, *Sec. &c.*

Through the kindness of Mr. C. A. Kerr, I have had a further opportunity of examining the produce of the Nellore copper mines, of which cabinet specimens were presented to the Asiatic Society two years ago*, before the formation of the "*Indian Copper Mining Company*" at Madras, for the purpose of turning to profit the mineral stores of this promising district.

* See Proceedings of the Asiatic Society, Feb. 1833, in vol. ii. p. 95.